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The integration of social responsibility into business operation: case study of Indonesian manufacturing industry

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Abstract. Prior studies argue that CSR should be integrated with business operations to get its benefits. However, the empirical research on how CSR and business operations can be incorporated is still limited. This study aims to investigate how to integrate CSR and business operations and to identify the impact of such integration on company performance. Using a sample of 342 manufacturing companies in Java, Indonesia, PLS-SEM was employed to create a path model depicting the relationships between functional integration and company performance. The results showed that Cost, Quality, Supplier, and Employee, have significant positive relationships on company performance, while Innovation and Customers have no impact on company performance.

1. Introduction

Corporate Social Responsibility (CSR) can be defined as "… a concept where-by companies integrate social and environmental concerns in their business operations and their interaction with their stakeholders on a voluntary basis" [1]. CSR is the most frequently used term to point out the correlation between companies and society [2] and has become a concern for all businesses [3]. Several prior studies emphasize the incorporation of CSR into business operation to improve organizational performance financially and non-financially. But, there are not many research works on how companies attempt to integrate CSR activities into their business [4]. There are still shortcomings of particular concepts, mechanisms for integration activities, and study on specific objectives in the field of social responsibility [5]. Empirical studies on the integration of corporate sustainability into strategic management are still needed [6] because it is still unclear how CSR and business operation can be integrated as well as how such integration between them can affect company performance. Therefore, this study aims to investigate how CSR and business operations are integrated and to examine the impacts of such integration on the organisational performance.

2. Theoretical background

The development of CSR practices depends on how they are integrated into current business practices [7, 8] which enables the companies to achieve not only significant social advantages but also meaningful business-related benefits [9]. CSR implementation can involve a 'built-in' and 'bolt-on' approach. The former is strategic through incorporating socially responsible behaviours into

companies' operations, processes, and decision-making. The latter is more potential by embracing social activities that extend beyond current business operations [10]. The former should involve mainstream functions, e.g., production, logistics, and quality control [11].

Some researchers highlight the necessity of incorporating CSR actions into the core activity of the value chain [12, 13, 14]. Companies should consider the social issues connected to the company's core activities, both the primary and supporting activities as a part of the value chain which consists of suppliers, customers, and specific tools [14]. Thus, they can evaluate which need to be enhanced to broaden the social agreement [12]. Prior studies address on four competitive priorities among manufacturing companies: low cost, quality, delivery performance (speed and reliability), and manufacturing flexibility [15, 16]. Another essential dimension is innovation [17] as one of the main drivers in the strategic orientation of a company [18]. Human Resource Management is also crucial in the integration process [19] by providing employees with the willingness, training, and motivation, necessary to apply CSR actions and initiatives [20].

Stakeholder theory claims that organisations have obligations not only to shareholders but also to stakeholders as groups and individuals who can affect, or are affected by, the achievement of a company's mission [21]. As the integration of CSR into business operation need to count in the stakeholders' concerns and objectives in the long-term perspective [22, 23], this study uses stakeholder theory to examine stakeholders' relationship in the functional integration. Through functional integration, CSR activities are incorporated into the business operation so that the companies ensure that their actions benefit them economically and socially [24, 25]. Therefore, we suggest the hypothesis that the functional integration of CSR and business operation has a positive impact on company performance. Partial Least Square Structural Equation Modelling (PLS-SEM) was employed to predict and explain measured constructs [26] to verify the hypothesis.

3. Research methodology

3.1 Sample and sampling process

This study was conducted in the manufacturing industry in Java, Indonesia, since approximately 2.8 million manufacturers (64.29%) are located in Java. Furthermore, Java contributes over 70% of Indonesian national GDP [27]. The samples were selected from eight industrial estates in Java: (1) Surabaya Industrial Estate Rungkut, (2) Sidoarjo Industrial Estate Berbek, (3) Kawasan Industri Gresik, (4) Pasuruan Industrial Estate Rembang, (5) Ngoro Industrial Park (Mojokerto), (6) Kawasan Industri Wijayakusuma (Semarang), (7) Jakarta Industrial Estate Pulogadung, and (8) Kawasan Industri Jababeka (West Java). This study employed the purposive sampling (non-probability sampling) as the samples were selected from the Manufacturing Industrial Directory 2017 and tenant list of the relevant industrial estates based on the conformity with the sample criteria [28].

3.2 Data collection

A survey using questionnaires was employed from June to September 2018 and administered both mail, e-mail, and online, as self-completion methods [29]. The questionnaires were addressed to senior managers because of their comprehensive understanding of the company strategy and practices related to CSR, and, therefore, would be competent to fill in the questionnaire. From 1,055 questionnaires distributed, 505 questionnaires were returned. After data screening, 342 cases with the response rate of 32.42% fitted the sample criteria and were used for further analysis.

4. Findings and discussion

4.1. The profile of respondents

Details on company characteristics are provided as in Table 1, signifying that the sample represents a variety of manufacturing companies. Most companies are manufacturers of food and beverage (21.1%). The majority of companies (84.8%) have more than 100 employees, and half of the

companies have been set up and operating in the range of 21 and 50 years. A three-quarter (73.7%) of the companies have private ownership, and most of them (67.5%) are in East Java.

Table 1. Company profile.

Variable	Frequency (n=342)	Percentage (%)	Variable	Frequency (n=342)	Percentage (%)
Main product			Number of employees		
Food and beverage	72	21.1	20 - 99	52	15.2
Tobacco	5	1.5	>100	290	84.8
Textile	11	3.2	Company's age (years)		
Leather and footwear	6	1.8	< 5	16	4.7
Goods from wood, handicraft	4	1.2	5-10	32	9.4
Paper	13	3.8	11-20	56	16.4
Coke and refined petroleum products	3	0.9	21-50	184	53.8
Chemicals and chemical products	44	12.9	> 50	54	15.8
Pharmaceuticals and medicinal chemical	7	2.0	Company's ownership		
Rubber and plastic products	34	9.9	Multinational	81	23.7
Basic metals	6	1.8	State-ownership	9	2.6
Non-metallic mineral products	23	6.7	Private	252	73.7
Fabricated metal products	39	11.4	Company's location		
Automotive	23	6.7	East Java	231	67.5
Computers, electronic and optical products	10	2.9	Centre Java	18	5.3
Repair and installation of machinery and equipment	5	1.5	West Java & Jakarta	93	27.2
Furniture	11	3.2			
Machinery and electrical equipment	20	5.8			
Other manufacturing	6	1.8			

4.2. Structural Equation Modelling (SEM) Analysis

Figure 1 presents the model of functional integration and company performance involving six constructs of functional integration, i.e., Cost, Innovation, Quality, Supplier, Customer, and Employee. To provide an understanding of CSR impacts on the company performance [30], organisational performances are measured through four constructs: financial performance (CFP) in strategic level, operational performance (COP) and social performance in tactical and operational level, including customer performance (CCP) and employee performance (CEP) [31].

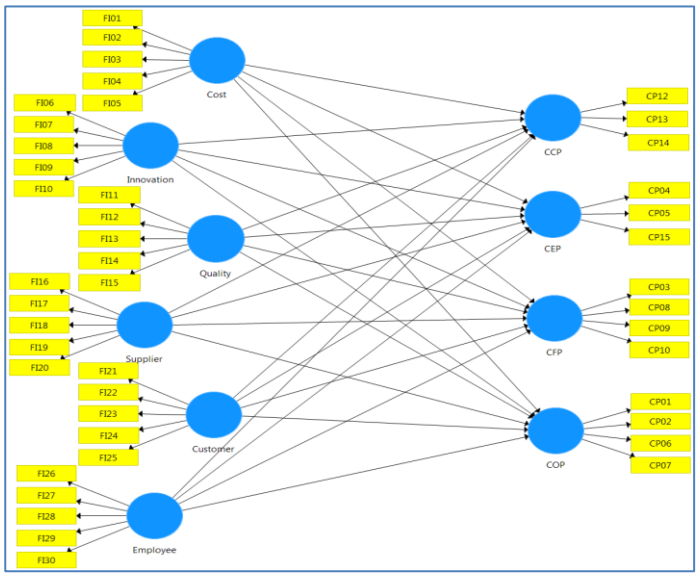

Figure 1. Model of functional integration and company performance.

Table 2. Indicators measurement.

Indicator	Loading	Indicator	Loading
FI01	0.771	FI23	0.830
FI02	0.766	FI24	0.731
FI03	0.804	FI25	0.818
FI04	0.805	FI26	0.811
FI05	0.781	FI27	0.860
FI06	0.721	FI28	0.787
FI07	0.851	FI29	0.877
FI08	0.848	FI30	0.818
FI09	0.789	CP12	0.873
FI10	0.776	CP13	0.860
FI11	0.810	CP14	0.842
FI12	0.832	CP04	0.848
FI13	0.845	CP05	0.886
FI14	0.814	CP15	0.835
FI15	0.834	CP03	0.786
FI16	0.756	CP08	0.855
FI17	0.754	CP09	0.891
FI18	0.844	CP10	0.773
FI19	0.767	CP01	0.759
FI20	0.791	CP02	0.821
FI21	0.810	CP06	0.812
FI22	0.795	CP07	0.827

4.2.1 Assessment of the measurement model. Table 2 displays the indicators measured using the 5-point scale from 1='strongly disagree' to 5='strongly agree'. In terms of company performance, subjective measures were used [32] by asking respondents to rate their company's performance

relative to their competitors [33] over the most recent 3-year period using the 5-point scale from 1=’much longer/much worse/much lower’ to 5=’much shorter/much better/much higher’. All of 44 indicators have loadings above 0.7 after eliminating two indicators of CCP and CEP with factor loadings below 0.7 [26]. As summarised in Table 3, all of ten constructs have Cronbach’s alpha more than 0.8, composite reliability for all constructs is in the range of 0.89 and 0.92, exceeding the threshold value of 0.7 [28, 34], and AVE is greater than the threshold of 0.50. Results show that the heterotrait-monotrait ratio of correlations (HTMT) used to assess discriminant validity were significantly different from one [35] and below 0.90 [36]. Accordingly, internal consistency reliability, convergent validity, and discriminant validity have been established for the model.

Table 3. Constructs measurement

Construct	AVE	Cronbach’s Alpha	Composite Reliability	R^2 value	Q^2 value
Cost	0.617	0.845	0.889		
Innovation	0.638	0.857	0.898		
Quality	0.684	0.885	0.915		
Supplier	0.613	0.842	0.888		
Customer	0.636	0.856	0.897		
Employee	0.691	0.888	0.918		
Customer Performance (CCP)	0.737	0.822	0.894	0.361	0.242
Employee Performance (CEP)	0.734	0.818	0.892	0.434	0.291
Financial Performance (CFP)	0.685	0.845	0.896	0.370	0.232
Operating Performance (COP)	0.648	0.819	0.880	0.389	0.230

4.2.2 Assessment of the structural model. The structural model assessment includes the collinearity, the significance, and relevance of the structural model relationship, the coefficient of determination (R^2), the effect size (f^2), and the predictive relevance (Q^2) [26]. The result shows that VIF values for all indicators are below 5, indicating no significant levels of collinearity detected among the indicators and the constructs [26]. Table 4 displays the path coefficient resulted from bootstrapping procedure with 5,000 boot-strap samples [26] at 500 observations in the original data with no sign changes option [37] with a significance level of 5% [34]. As shown in Table 4, 21 of 24 paths have a positive direct effect, and three of them show the negative direct effect. Eight positive direct effects are significant because their t-value are higher than the critical value at p-value 5%, this is, Cost → CCP, Cost → COP, Employee → CEP, Quality → CCP, Quality → CFP, Supplier → CCP, Supplier → CEP, and Supplier → CFP. Other three direct effects are significant at p-value 10%: Cost → CFP, Employee → CFP, and Quality → COP. Among the positive and significant paths, the most substantial direct effect is on Supplier → CEP (0.326), then Employee → CEP (0.291), and finally Cost → COP (0.269) as well as Quality → CCP (0.269). Based on those results, the hypothesis were accepted that the functional integration of CSR and business operation has positive and significant impacts on company performance. Table 3 exhibits that four constructs of company performance are weak to medium predictors with R^2 value from 0.361 to 0.434. Table 4 shows that six predictors have weak effect size (f^2) on company performance. As presented in Table 3, the Q^2 values are above 0, signifying that the exogenous constructs have excellent predictive relevance for all endogenous constructs [26].

Table 4. Path coefficient, T value, P value, and f^2 value.

Path	Path coefficient	T value	P value	f^2 value	Path	Path coefficient	T value	P value	f^2 value
Cost -> CCP	0.138	2.307	**0.021**	0.017	Innovation -> CCP	0.062	0.836	0.403	0.002
Cost -> CEP	0.093	1.422	0.155	0.009	Innovation -> CEP	-0.030	0.440	0.660	0.001
Cost -> CFP	0.121	1.831	0.067	0.014	Innovation -> CFP	0.102	1.438	0.150	0.006
Cost -> COP	0.269	4.225	**0.000**	0.069	Innovation -> COP	0.028	0.371	0.711	0.000
Customer -> CCP	0.030	0.390	0.697	0.000	Quality -> CCP	0.269	3.650	**0.000**	0.039
Customer -> CEP	-0.058	0.813	0.416	0.002	Quality -> CEP	0.134	1.552	0.121	0.011
Customer -> CFP	-0.073	0.923	0.356	0.003	Quality -> CFP	0.244	3.155	**0.002**	0.033
Customer -> COP	0.083	0.973	0.331	0.004	Quality -> COP	0.146	1.761	0.078	0.012
Employee -> CCP	0.033	0.374	0.709	0.001	Supplier -> CCP	0.179	2.151	**0.032**	0.018
Employee -> CEP	0.291	4.177	**0.000**	0.053	Supplier -> CEP	0.326	4.096	**0.000**	0.069
Employee -> CFP	0.155	1.945	0.052	0.013	Supplier -> CFP	0.169	2.165	**0.030**	0.017
Employee -> COP	0.103	1.231	0.218	0.006	Supplier -> COP	0.125	1.641	0.101	0.009

5. Conclusion

This study is intended to investigate how CSR and business operations are integrated and to examine the impacts of such integration on the company performance. The structural model assessment revealed that functional integration has significant positive results on company performance. Specifically, Cost has substantial impacts on the customer, operating, and financial performance, while Employee has effects on the employees and financial performance. Quality relates to the customer, operating, and financial performance significantly, and Supplier gives effects on the customer, employee, and financial performance. The findings from this study contribute to additional empirical evidence of the CSR integration and its impacts on company performance, particularly in the manufacturing industry.

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